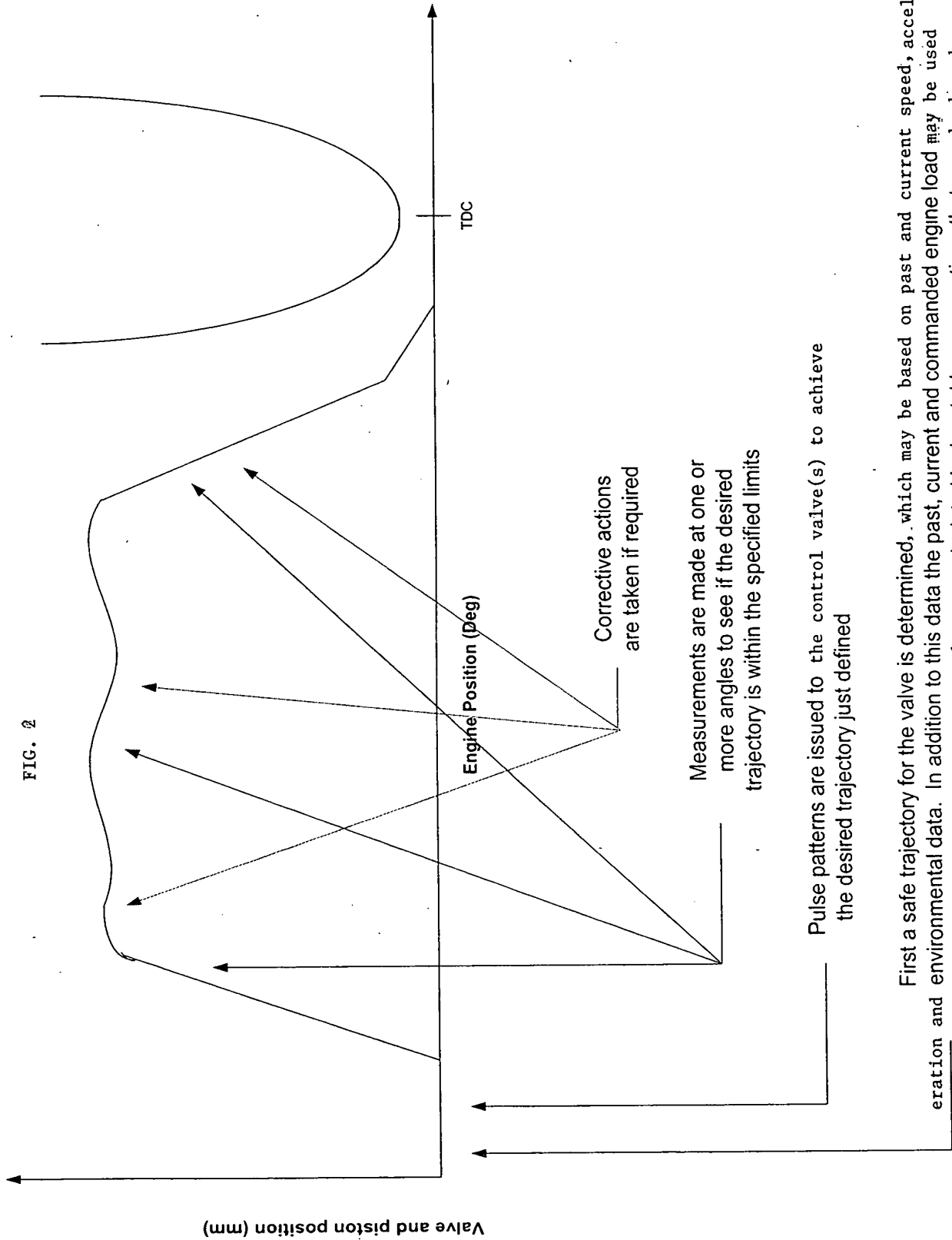


FIG. 1  
 (Prior Art)



First a safe trajectory for the valve is determined, which may be based on past and current speed, acceleration and environmental data. In addition to this data the past, current and commanded engine load may be used as well. The safe trajectories come from precalculated lookup tables or equations that may be based on engine position (deg), not time and therefore these limits will not change with engine operation

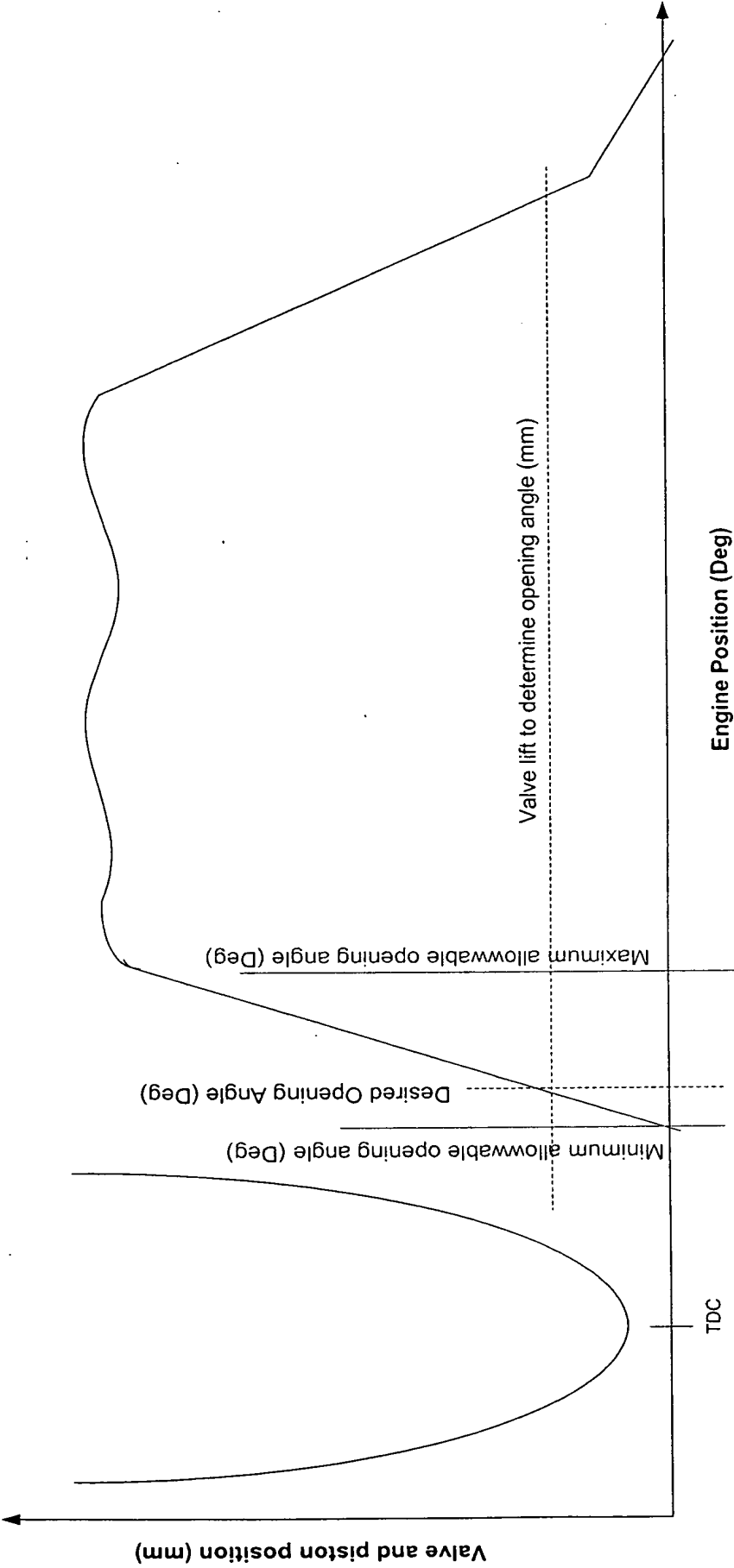


FIG. 3

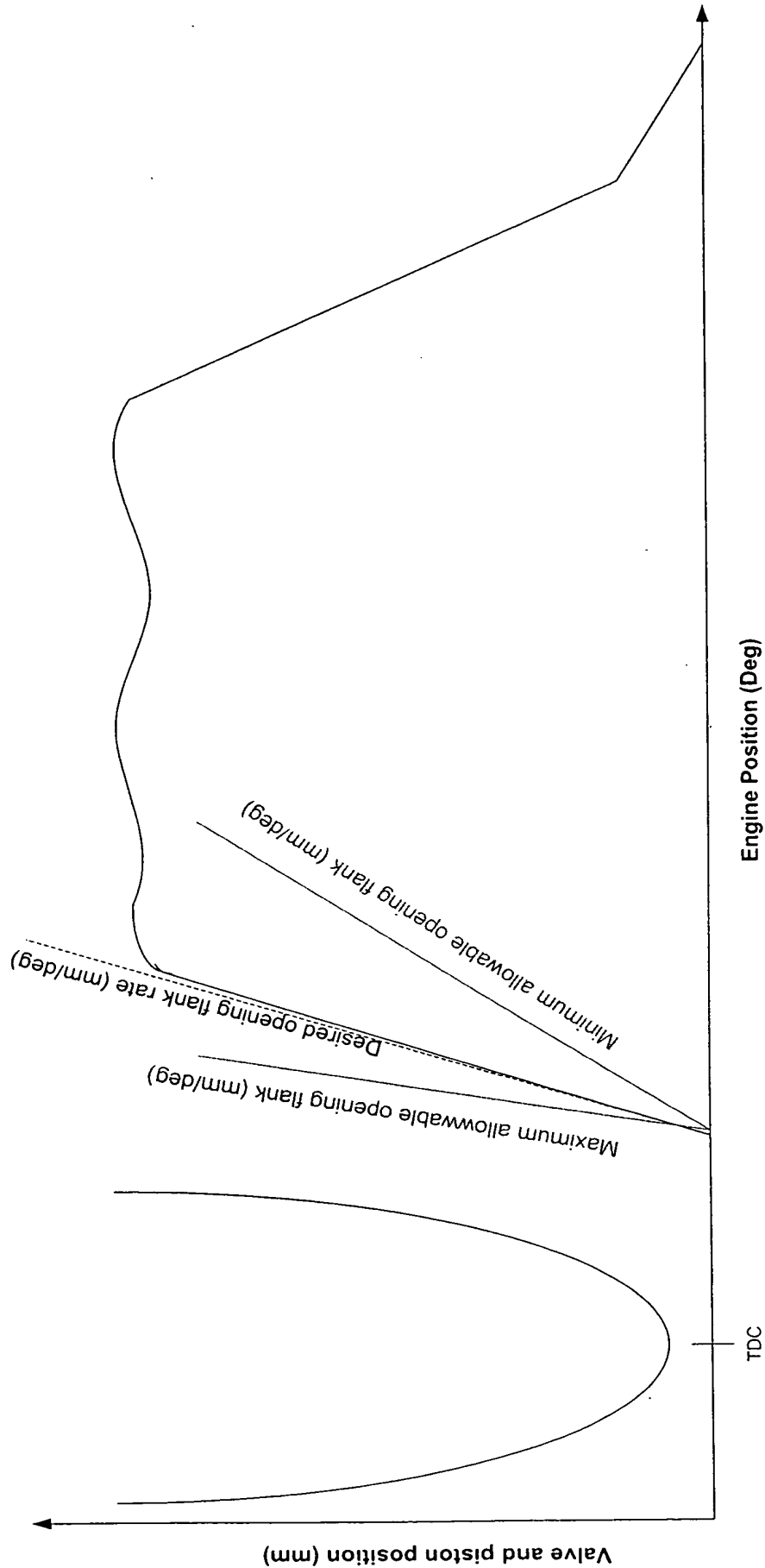


FIG. 4

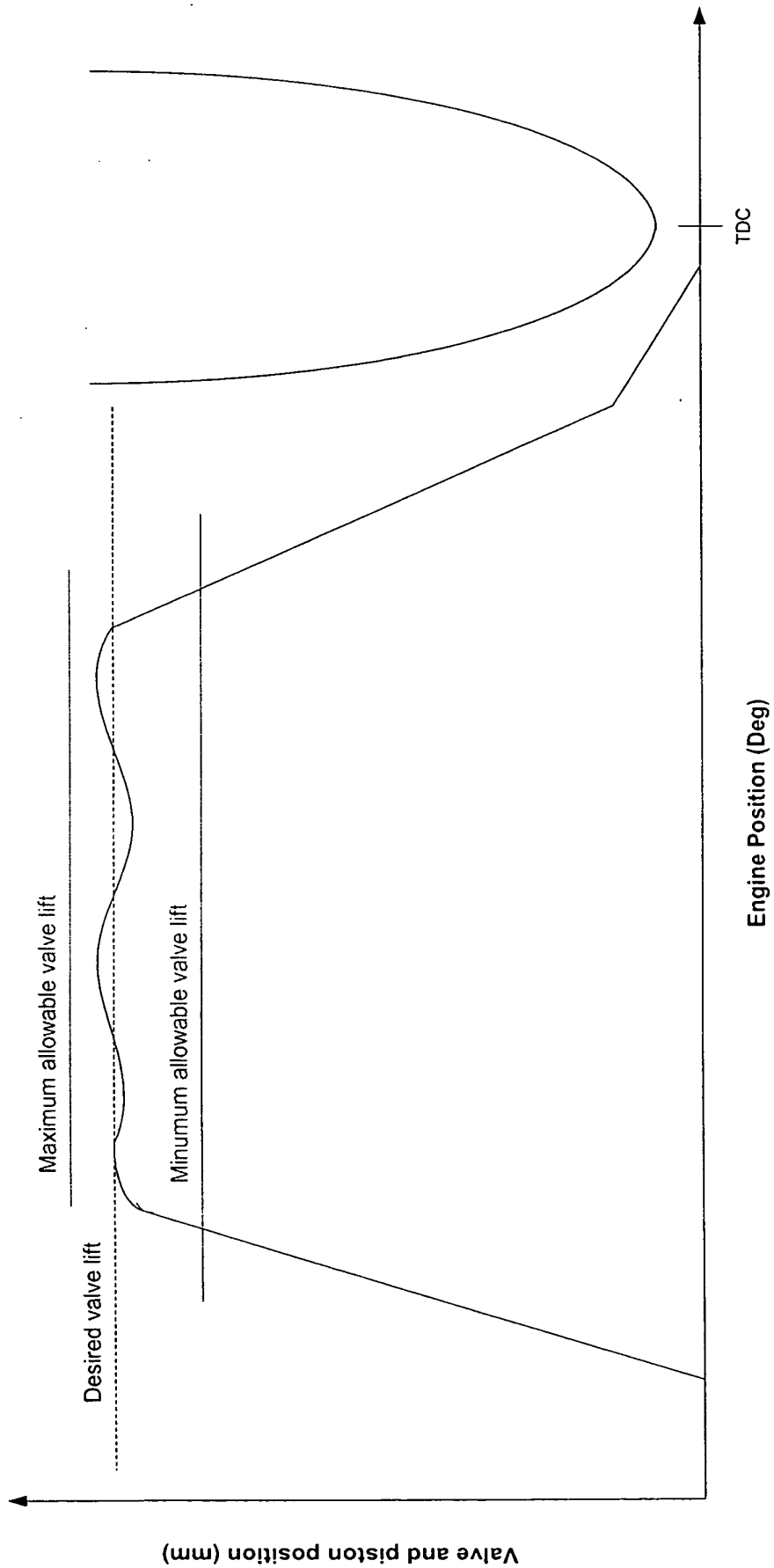


FIG. 5

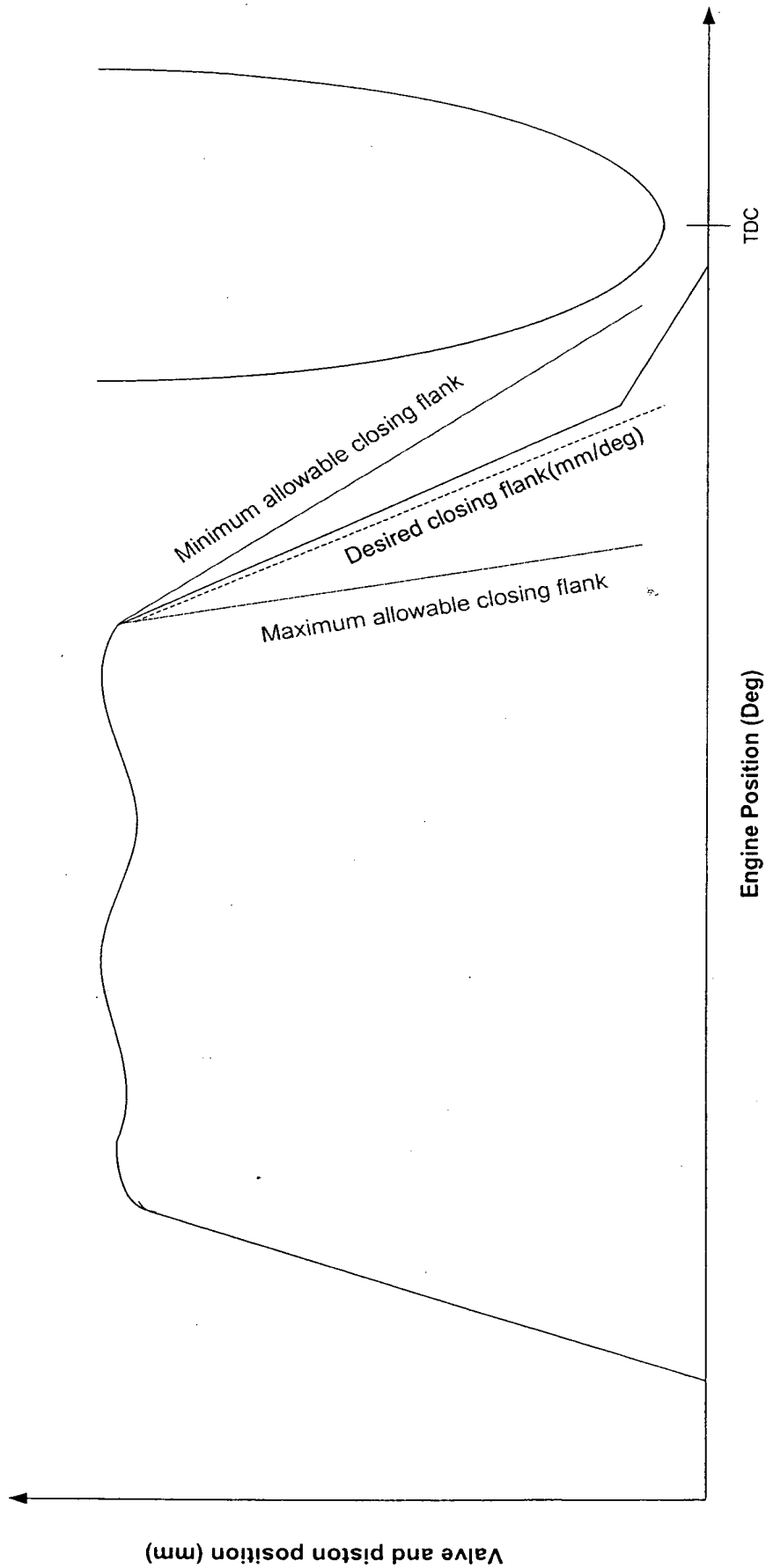


FIG. 6

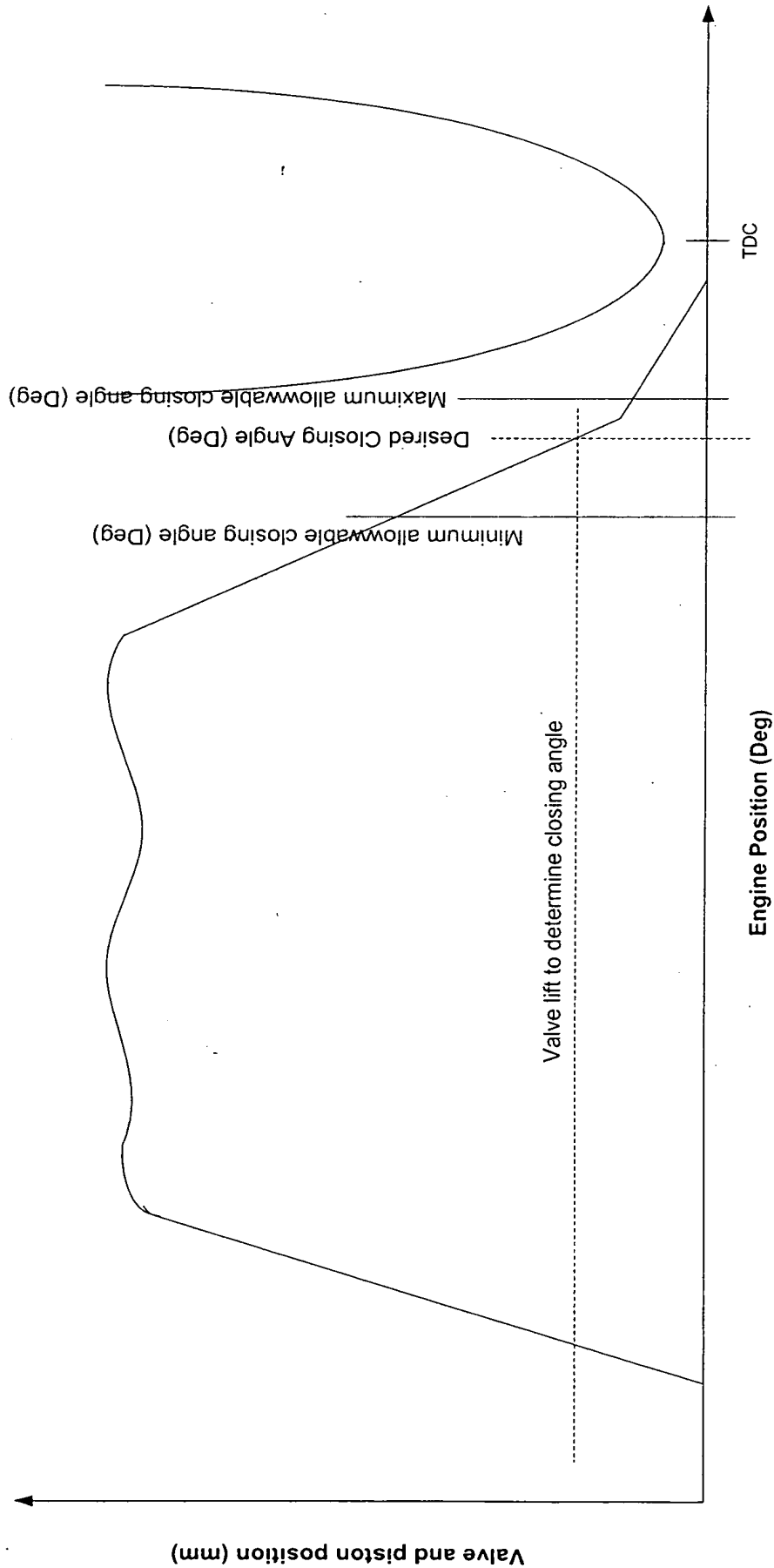


FIG. 7

FIG. 8

